

CLAIMS

We claim:

1. A transmission and torque limiting assembly for transmitting rotation from a drive to a compressor, said assembly comprising;

5 a driven member for rotation by the drive about an axis,
a drive member disposed about and coaxial with said driven member,
a mechanism for transmitting rotation from said driven member to said drive member and for disengaging said drive member from said driven member in response to a predetermined reactive force between said members,
10 said mechanism including cams presented by said driven member and spring arms extending resiliently and spirally from said drive member to distal ends for engaging said cams for transmitting rotation from said driven member to said drive member and for resiliently moving radially to allow said distal ends to spring past said cams in response to the predetermined reactive force.

15 2. A torque limiting assembly as recited in claim 1 wherein said distal ends include cam followers for engaging said cams to transmit the rotation from said driven member to said drive member and for releasing from said cams in response to the predetermined reactive force as said spring arms resiliently move.

20 3. A torque limiting assembly as recited in claim 2 and including a pivot pivotally connecting one of said cam followers to each of said distal ends.

4. A torque limiting assembly as recited in claim 3 and including a stop pin carried by each of said cam followers for reacting with the adjacent distal end to limit pivotal movement of each cam follower in one direction to maintain each cam follower in a locked position for permitting transmission of rotation from said driven member to said drive member and for allowing pivotal movement of each cam follower out of said locked position in response to the predetermined reactive force.

5. A torque limiting assembly as recited in claim 4 wherein each of said cam followers includes a recess for receiving a selected one of said cams for moving said cam follower out of said locked position.

6. A torque limiting assembly as recited in claim 5 wherein each of said cams comprises a post and said recess is complementary to said post.

7. A torque limiting assembly as recited in claim 6 wherein said driven member is a pulley with a planar face, said posts extending axially from said planar face.

8. A torque limiting assembly as recited in claim 7 wherein said drive member includes a hub coaxially disposed within said pulley, said spring arms integrally formed with said hub and extending radially and spirally between said hub and said posts for positioning said cam followers to engage said posts.

9. A transmission and torque limiting assembly for transmitting rotation from a drive to a compressor, said assembly comprising;

a pulley having a planar face for rotation by the drive about an axis,

a drive member having a hub coaxially disposed within said pulley,

5 a plurality of cam posts extending from said planar face,

a plurality of spring arms integrally formed with said hub and extending radially and spirally therefrom to distal ends, and

a plurality of cam followers carried by said distal ends for engaging said posts for transmitting rotation from said pulley to said drive member and for
10 causing said spring arms to resiliently move radially to allow said distal ends to spring past said posts for disengaging said drive member from said pulley in response to a predetermined reactive force,

each of said cam followers including a pivot pivotally connecting said cam follower to a selected one of said distal ends,

15 a recess for receiving a selected one of said posts, and

a stop pin carried by each of said cam followers for reacting with said selected distal end for limiting pivotal movement of said cam follower in one direction to maintain said cam follower and said selected post in a locked position for permitting transmission of rotation from said pulley to said drive member and for
20 allowing pivotal movement of said cam follower out of said locked position in response to the predetermined reactive force.